MONTANA'S
IMMUNE RESPONSE
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Standards for Immunization Practices
The Montana Immunization Program would like to introduce all vaccine providers in the state to a competency-based strategy to assure we are meeting the National Immunization Standard regarding vaccine administration**. Standard 10 states, *"Persons who administer vaccines and staff who manage or support vaccine administration are knowledgeable and receive ongoing education."***

The Immunization Program is developing resources and strategies to assure appropriate administration of vaccine. Our emphasis will be on safety, efficacy and patient satisfaction together with proper vaccine administration technique, which is the provider's role. **We would encourage you to take advantage of at least one educational or training opportunity for vaccine providers on your staff each year.**

Our assumptions are:
- **With proper administration technique, we can prevent some local side effects of vaccine,**
- **We can empower parents and help reduce their anxiety,**
- **Immunization providers do want to be competent.**

Some of the educational opportunities available to you are listed below. We encourage you to take advantage of one or all of these opportunities to assure the competency of your current staff as well as all new hires in the future. All programs are offered at no charge to your clinic, but will provide a wealth of resources regarding best practices.

1. *Video*-Immunization Techniques: Safe, Effective, Caring. *Developed by the California Immunization Program.* ***This video has been distributed to all county health departments, Tribal and IHS clinics.***
(Continued on page 2)

Whooping Cough Update

Cases of pertussis continue to be reported in several Montana counties as our 2005 year-to-date total surpasses 200 cases. The dramatic increase in cases is not unique to Montana; national statistics reflected nearly a 100% increase in cases in 2004 when compared to 2003. The increase in cases can be partially explained by improved reporting and wider use of more sensitive testing methods like polymerase chain reaction (PCR). In addition, pertussis activity at the national level seems to be cyclical, peaking every 3-5 years and we, ladies and gentlemen, are riding the crest of the wave.

While many counties have reported a sporadic case or two, Yellowstone and Cascade counties have combined to report 65% of the approximately 200 cases. Other counties with significant recent clusters include: Lewis & Clark, Teton, Ravalli and Musselshell. As expected, no significant difference with respect to gender exists, approximately half the cases are male, half female. While we have had cases among all age groups, children and teens 10-19 make up 60% of the cases reported statewide. Pertussis can be very serious for young children, particularly infants less than one year of age. One pertussis related death was reported in Gallatin County in 2004, fortunately no deaths have been reported in 2005 to date. Most cases had been appropriately vaccinated. However, since the present vaccine is licensed for children less than 7 years of age, vaccine immunity has waned leaving most teens and adults susceptible.

Local public health agencies continue to work closely with health care providers, schools and those ill or exposed to prevent spread. Control guidelines issued by the Centers for Disease Control and Prevention and resources from DPHHS have been widely distributed. If you are interested in more information on pertussis in your area or in obtaining resource materials please contact your local public health agency.

(Standards for Immunization Practices cont from page 1)

1. Video – *Immunization Techniques: Safe, Effective, Caring…(cont)*

Along with the video is a pre and post-test, so the provider can evaluate basic skills and competencies required for vaccine administration.

The checklist and basic information regarding vaccine administration are also found in Appendix G of the *Epidemiology and Prevention of Vaccine-Preventable Diseases,* "Pink Book"

Private clinic staff can call their local county, Tribal or IHS clinic to borrow this video. If those clinics are unable to locate this video, please call the Immunization Program, to borrow a copy at 406-444-5580.

2. Annual Regional Immunization Workshops – including Disease Surveillance

The Immunization program develops and presents five workshops around the state between January and March each year. There is no charge for these workshops and lunch is provided for the attendees.

In the 2004 workshops, several evaluations from attendees expressed a need for a basic or refresher course, along with the more technical presentations of our regular all day workshops. Therefore, we included a half-day for the basics and a review of some of the principles of vaccination for the 2005 workshops.

3. The Satellite Video Conferences from CDC, "Epidemiology and Prevention of Vaccine-Preventable Diseases."

These four live satellite broadcasts are each 3.5 hours, and are presented by epidemiologists and experts from the National Immunization Program of the Centers for Disease Control and Prevention.

If you are unable to set aside the time on the scheduled Thursdays in February and March to view the broadcast, the tapes are available from the Montana Immunization Program, following the broadcast. These broadcasts are a "must see" for all active vaccine providers!

4. **The National Immunization Program just announced the availability of a web-based training course, "IMMUNIZATION: YOU CALL THE SHOTS". The first module titled, "Understanding the Basics, General Recommendations on Immunizations,"** offers basic immunization principles, practice questions and resource materials. It is an interactive self-study program that participants can complete independently. It is intended for nurses, nursing students, medical assistants, pharmacists, health educators, and other healthcare providers working in private offices, hospitals, and public health settings. To access this module, go to: http://www2.cdc.gov/nip/isd/ycts/mod1courses/genrec/start.asp

The Immunization Program will be asking you during our clinic visits of 2005, what your staff is doing to assure on-going education regarding vaccine administration.

Monty's Available!

Monty the Immunization Bear is available on loan for Immunization events such as health fairs and parades. He is the mascot for the Immunization Program, symbolizing children (the teddy-bear) and the protection of vaccines symbolized by the umbrella. If you would like to borrow Monty for an event in your community, contact Beth Cottingham at 444-2969.

Got Rabies Vaccine & RIG?

As of April 2005, Sanofi-Pasteur (formerly Aventis) does not yet have rabies vaccine available, however, this company does have Rabies Immune Globulin or RIG available to order. To order RIG from Sanofi – Pasteur call 1-800-VACCINE. Sanofi-Pasteur is planning to have vaccine available later in the year.

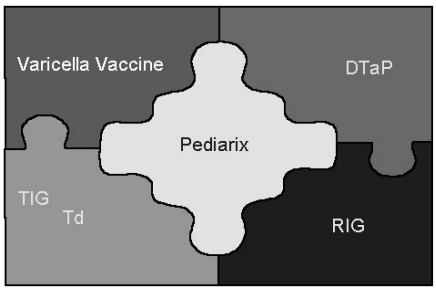
Chiron continues to have rabies vaccine available. Their product is called, "RabAvert". This can be ordered either from a vaccine distributor such as McKesson, or Henry Schein, or directly from Chiron under special circumstances.

The special circumstances for ordering vaccine directly from Chiron are:

If you are a **small private clinic**, you can contact Chiron and set up an account and order the vaccine directly. That number is 1-800-244-7668.

If you are a **hospital emergency room** and your facility has NO rabies vaccine when a rabies exposure presents, call 1-888-798-9877

“PUZZLES” OF THE MONTH



Situation 1: A clinic has been keeping temperature logs on the vaccine storage refrigerator/freezer for 5 years.

Question: How long must they continue to store these records?

Answer: It is important that temperature logs are kept for at least 3 years. As the refrigerator ages, you can track recurring problems. If temperatures have been documented out of range, you can determine how long this has been happening and take appropriate action.

Situation 2*:* A patient has expressed concern that some vaccines have been produced in fetal tissue.

Question: How can this concern be addressed?

Answer: The production of a few vaccines, including those for varicella, rubella, and hepatitis A, involves growing the viruses in human cell culture. Two human cell lines provide the cell cultures needed for producing vaccines; these lines were developed from two legally aborted fetuses in the 1960s. These cell lines are maintained to have an indefinite life span. No fetal tissue has been added since the cell lines were originally created.
Some parents are concerned about this issue because of untrue "facts" they have encountered on the Internet. Two such "facts" are that ongoing abortions are needed to manufacture vaccines and vaccines are contaminated with fetal tissue.
Parents can read the real facts and several thought-provoking articles about this issue at **www.vaccineinformation.org/concern.asp** and then make an informed decision.
A Catholic bishop's statement that Catholic parents have no general obligation to refuse permission for these vaccines can be accessed at **www.cdc.gov/nip/vacsafe/concerns/gen/cathnews.htm**
You can also refer parents to **www.cdc.gov/nip/vacsafe/concerns/gen/humancell.htm** for more information.

Situation 3: A 13-month-old child presented to a clinic and was given an expired dose of MMR.

Question: When should this dose be repeated?

Answer: you must wait at least 4 weeks after the previous (expired) dose was given before repeating it. If you prefer, you can perform serologic testing to check for immunity. Check with the Manufacturer, because in some rare circumstances the dose may not need to be repeated.

Situation 3: I heard that it is not necessary to aspirate prior to an IM or an SC injection.

Question: Isn’t there a danger in not aspirating?

Answer: Aspiration prior to injection is intended to reduce the risk of injecting vaccine into a vein or artery. Although some experts recommend aspiration, there are few data that support the need to aspirate. The needle is so large in comparison to the capillaries supplying blood to the IM and SC regions that the needle simply passes through capillaries.

Don’t forget to pre-book your influenza vaccine for the 2005-2006 season!!!

PHDS De-Duplication

Now that the Public Health Data System (PHDS) has been rolled out to most of Montana, it is time to start working on continually improving data quality. The ideal is to collect one complete immunization record per child. Since some children received immunizations in more than one county, records were created in the legacy systems in more than one county. As each county's registry was uploaded to the statewide registry, some children had more than one immunization record loaded.

As each county comes onto PHDS they are instructed to run the client matching routine to merge all duplicate records within that county. This routine matches records in the registry that share the same last name and birthdate, this includes multiple births. The user can choose to merge the two records or mark them as not a match. Consult your PHDS manual for instructions on running the client matching routine. Print the client match report before you proceed. Once a record is merged, it should be checked for duplicate immunizations, and the duplicate immunizations deleted. We do not generally recommend deleting records, because there may be MCH or family planning records you cannot see included in the patients record.

One of the best ways to prevent creating duplicate records is searching for each immunization record properly, so a new record is not created when a child already has a record in the system. **We recommend birthdate only search first.** This eliminates the possibility of not finding a child's record due to a typo in the first or last name. The birthdate search also helps the searcher locate a child who may have been entered under two different last names, i.e., the child's mother and father do not have the same last name.

Finally, if duplicate records span county lines, some diplomacy should be used. It is possible to change the county-of-authorization, move the client to your county and merge records with the client match routine. However, while it may not be feasible to discuss every single record, you should discuss general guidelines with the county from which you want to move records.

As data quality continues to improve in the registry, it will become more and more useful to everyone.

FDA Committee recommends Whooping Cough Vaccine Boosters

By RANDOLPH E. SCHMID Associated Press

WASHINGTON -- Hoping to halt the rising number of whooping cough cases in the United States, a federal advisory panel on Tuesday recommended approval of two new booster vaccines.

The Food and Drug Administration committee unanimously recommended approval for Boostrix, a single-dose vaccine against whooping cough, tetanus and diphtheria designed for people age 10 to 16. It is made by GlaxoSmithKline Biologicals.

The committee also unanimously recommended approval for Adacel, from Sanofi Pasteur, intended to protect both adolescents and adults -- people age 11 to 64 -- from the same three diseases.

The FDA is not required to follow the recommendations of its advisory committees, but generally does so.

Youngsters have been vaccinated against whooping cough since the 1940s, but doctors have begun to realize that the protection fades over time.

"In 1976 there were 1,000 cases of whooping cough in the United States, now there are 20,000," Dr. Colin Marchant of Boston University explained in a telephone interview.

The last dose of the vaccine for infants and children is given before age 7 years and over the next 10 to 15 years it wears off, Marchant said.

It's a nasty, coughing disease, and nearly half of the cases are in adolescents, he said. It can lead to vomiting, weight loss and sleep disturbance over a prolonged time, Marchant said. And adolescents can easily spread the illness to others, he added.

The Centers for Disease Control and Prevention received 18,957 reports of whooping cough last year, up from 11,647 in 2003 and just 1,707 in 1980.

In Montana, there were five cases of whooping cough in 2003, 84 in 2004 and 208 so far this year, said Jim Murphy, head of communicable diseases surveillance for the Department of Public Health and Human Services.

Comments on this article from the Montana Immunization Program *The Montana Immunization Program is very excited about TdaP vaccine becoming available in the near future. As the above article points out the FDA has not yet licensed this vaccine. TdaP could make a huge difference in the transmission of pertussis from adolescents and adults to infants when implemented in the future.*

Know the Facts About Meningococcal Disease

Thursday January 7th Stephen Donovan a healthy 14 year-old British teenager came home from school complaining of a sore throat and not feeling well. The doctor told Stephen's mom for Stephen to go to bed early. Britain was in the middle of a flu epidemic, so it was assumed that Stephen was coming down with the flu.

Friday, January 8th at 7:30 a.m. Stephen is rushed to the hospital. Upon entry to the hospital all of Stephen's organs except for his liver started shutting down, he went into cardiac arrest three times. The family was told Stephen might lose his limbs if he survives. At 5:00p.m. less than 12 hours Stephen was dead. Stephen had died from a vaccine preventable disease, Group C meningococcal disease.

Overview of Meningococcal Disease

- Neisseria meningitides strikes about 2,500 Americans each year, 10-15% of them will die.
- Most at risk are children <5 years, teenagers and young adults
- 1997-2001, age group 15-24 had 266 deaths, age group 1-4 years had 146 deaths
- Nearly 20% of survivors suffer long-term disabilities: brain damage, amputations, deafness, retardation, cranial nerve palsy
- Disease attacks the brain (meningitis) or poisons the blood (meningococcemia)
- Symptoms resemble the flu: fever, headache, stiff neck, nausea
- Transmitted via respiratory secretions
- Five serogroups are responsible for the disease in the US-A, B, C, Y, W-135
- Vaccine is available to protect against 4 of the 5 serogroups
- Immunization can prevent up to 80% of cases among adolescents and college students

At Risk: College Students and Adolescents

- 60% increased incidence among adolescents and college students in the 1990's
- College freshmen living in dorms are at a six-fold increased risk
- Lifestyle factors:
  - communal living: college dorms, barracks, overnight camps, boarding schools
  - sharing utensils, beverages, lip balm, cigarettes
  - kissing, coughing
  - exposure to cigarette smoke; active and passive

Body Invasion-How meningococcal bacteria affects the body

You are about to take a journey into a wondrous land of shadows and ideas your next stop, the meningococcal zone.
The following is from the Meningitis Trust, UK.

Meningococcal bacteria enter the body through the nose and mouth. The nose is lined with a ciliated mucous membrane, which traps particles of dust and other impurities such as microorganisms to prevent them from entering the lungs. The meningococcal bacteria can be carried at the back of the nose and throat for weeks or months without causing illness.

When the meningococcal bacteria invade, they release a chemical, which destroys the cilia at the back of the nose. The bacterium crosses the mucous membrane and enters the bloodstream.

When the meningococcal bacteria enter the bloodstream, they begin to multiply rapidly, and double in number every 20-30 minutes. The outer coating of the bacteria releases endotoxins and the body's immune system will start to fight the infection.

White blood cells will begin to engulf the bacteria, but this is not enough. The WBCs have no effect on the endotoxins.

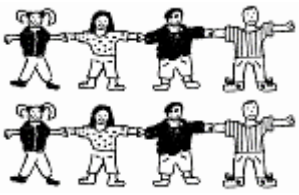
When meningococcal bacteria travel in the bloodstream to infect the meninges, the blood vessels in the lining of the brain are damaged. This allows the bacteria to break through and infect the cerebrospinal fluid. The meninges become inflamed and pressure around the brain cause nerve damage. This causes the specific symptoms associated with **meningitis**, severe headache, and dislike of bright light, stiff neck and confusion.

As the bacteria are multiplying rapidly in the bloodstream, they begin to release endotoxins that are released into the bloodstream. WBCs start to engulf and kill the bacteria, but will not have an affect on the endotoxins. The endotoxins cause the WBCs to release a chemical, which makes the walls of blood vessels sticky. The WBCs stick to the walls and cause damage to the blood vessels.

Treatment with antibiotics will kill the bacteria, but have no effect on the endotoxins. When the bacteria die, they release even more endotoxins. This is why a septicemia rash may seem to worsen after treatment began. During this process proteins contained in the blood that prevent clotting have been destroyed. Platelets in the blood will begin to clot to try and repair the damage to the blood vessels. They also stick to the WBCs, and the blood vessels will eventually become blocked.

When blood vessels become blocked, the surrounding tissues die. The damaged vessels disintegrate, allowing blood and other fluids to leak out. The visible rash associated with **septicemia** is caused by blood leaking under the skin.

Internally, blood vessels will be affected throughout the body, causing damage to the major organs and slowing the heart rate. This will result in the more specific signs of **septicemia**, fever with cold hands and feet and shock.



Most commonly **meningitis** and **septicemia** (meningococcal disease) can damage all of the organs of the body.

For additional information for your clinic about meningococcal disease, the Vaccine Education Center at the Children's Hospital of Philadelphia offers two pads containing 50, 8 ½ x 11 tear sheets for free plus shipping and handling. To order your two free pads of tear sheets, call: 215-590-9990, or e-mail at vaccines@email.chop.edu. At the CDC website, the Advisory Committee for Immunization Practices has the recommendation for use of meningococcal vaccine for adolescents and college freshman from their latest meeting at: cdc.gov/nip/vaccine/meningitis/mdv4/mcv4/_acip.htm

Pink Book Recommendations on PPV-23 Revaccination

Routine re-vaccination of immunocompetent persons is not recommended. Revaccination is recommended for persons age ≥ 2 years of age at highest risk of serious pneumococcal infection. Only ONE PPV23 revaccination dose is recommended for high-risk persons. This dose is recommended at least 5 years after the first dose.

The following groups are considered high-risk candidates for revaccination:

- **Adults 65 and older should receive a 2nd dose if they received the first dose 5 or more years previously**
- **Persons ≥ 2 years of age with the following**
  - **Chronic illness**
  - **Anatomic or functional asplenia**
  - **Immunocompromised (disease, chemotherapy, steroids)**
  - **HIV infection**
  - **Environments or settings with increased risk**

April 24-30, 2005

Love them. Protect them. Immunize them.
Vaccination: An Act of Love

At a Glance: National Infant Immunization Week (NIIW) is an annual observance to promote the benefits of immunizations and to focus on the importance of immunizing infants against 12 vaccine-preventable diseases by age two.

This year NIIW will again be held in conjunction with the Pan American Health Organization's Vaccination Week in the Americas (VWA), April 23-30, 2005. The U.S. will join together with 35 countries in the Western Hemisphere to concurrently promote the need for routine vaccinations for infants and children during the last week in April. Since 1994, NIIW has provided an excellent opportunity for local and state health departments, national immunization partners, healthcare providers, and community leaders from across the country to highlight the positive impact of immunization on the lives of infants and children and to call attention to immunization achievements. This year NIIW will again be held in conjunction with the Pan American Health Organization's Vaccination Week in the Americas (VWA), April 23-30, 2005.
Bi-national awareness and education events in sister city sites along the US-Mexico border are being planned this year to celebrate NIIW and VWA in partnership with PAHO, US-Mexico Border Health Commission (USMBHC), CDC, state and local health departments, and other immunization partners.

Special kick off events will be held in Las Cruces, New Mexico – Ciudad
Juarez, Mexico. These border communities will join over 500 communities from across the United States to participate in NIIW and VWA by planning community
awareness and media events to promote infant immunizations to parents, caregivers, healthcare providers, and their communities. Join in the celebration—create your own NIIW event and help to ensure that all children in your community and throughout the Western Hemisphere have a healthy and safe childhood free from vaccine-preventable diseases.

Visit this CDC web site for more information about: event checklist & timeline, key messages, media advisory, sample editorial, and talking points.
http://www.cdc.gov/nip/events/niiw/2005/05default.htm#brief

Tuberculin testing (PPD) and Measles Containing Vaccine

MMR vaccine can affect the results of a PPD tuberculin skin test. MMR has a slight immunosuppressive effect therefore, a false PPD could result if the MMR vaccine was given first. The following guidelines may provide some help:

- Apply PPD at the same visit as MMR
- Delay PPD for 4 weeks or more if MMR was given first
- Apply PPD first, then give MMR when skin test is read

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